



## **SOLAR URTICARIA**

### **What are the aims of this leaflet?**

This leaflet has been written to help you understand more about solar urticaria. It tells you what it is, what causes it, what you can do about it, and where you can find out more about it.

### **What is solar urticaria?**

The term 'solar urticaria' describes a relatively rare type of [urticaria](#) which is triggered by exposing the skin of susceptible individuals to sunlight. Urticaria is also known as hives, weals or nettle rash.

Solar urticaria is found worldwide, and whilst it can start at any age it appears to be those aged between 20 and 40 who are most affected.

### **What causes solar urticaria?**

Solar urticaria occurs when sunlight causes the release of histamine from cells in the skin called mast cells. Exactly how and why certain types of sunlight cause this is currently uncertain.

The appearance of solar urticaria can be quite dramatic as it usually develops within just a few minutes after exposure to the causative light. The 'types' of light responsible for solar urticaria are long wavelength ultraviolet (UVA) and/or short wavelength ultraviolet (UVB), along with visible light (e.g. sunlight not containing ultraviolet).

### **What are the symptoms of solar urticaria?**

The main symptoms of solar urticaria are itching, stinging and burning. Rarely the rash is accompanied by symptoms such as headache, nausea, vomiting, breathing difficulties and low blood pressure.

### **What does solar urticaria look like?**

Solar urticaria looks like flat red marks or raised red/white weals on the skin. The weals may come together with sharp cut off lines at clothing. Sites affected depend on areas exposed to sunlight. Solar urticaria may develop on skin apparently covered by clothing especially if the clothing is thin.

The rash may last a few minutes, or hours, and usually disappears within a day. Rarely, it may last longer than 24 hours, even if further exposure to the causative light is avoided. No scarring is left behind.

### **How is solar urticaria diagnosed?**

The diagnosis is usually based on its appearance and/or a history of the rash appearing minutes after sunlight exposure which then settles down within a few hours. Photographs of the rash may help with making the diagnosis.

Phototesting (trying to reproduce the rash by testing the skin with different wavelengths of ultraviolet and visible light, also known as monochromator light testing) may also be helpful. Phototesting requires referral to a specialised centre. Other tests such as blood tests and a skin biopsy may be needed in some cases.

### **Can solar urticaria be cured?**

Some cases of solar urticaria do spontaneously go away, however for the majority of cases it persists. If it does persist then the treatments described below may provide control by reducing the appearance and symptoms of the solar urticaria.

### **How can solar urticaria be treated?**

Treating solar urticaria can be difficult, especially if it is visible light causing the problem. Taking measures to avoid sunlight exposure is important to prevent its occurrence and may require major adjustments to a person's lifestyle. If medication is needed to help control, this can be taken episodically to

prevent/treat flares or regularly, depending on severity. Such steps to help prevent eruptions include the following:

- **Behavioural modifications.** Spend time in the shade between 10am and 3pm when it's sunny.
- **Clothing.** Simple measures include the wearing of clothes made from tightly woven cloth, long sleeves, a hat (ideally brimmed); shoes rather than sandals, and gloves, particularly for driving.
- **Sunscreens.** Solar urticaria is characterised by sensitivity mainly to visible light and ultraviolet A, and more rarely ultraviolet B. Individuals may be sensitive to just one of these wavebands, or all. Phototesting can help to determine which wavelengths are important to avoid in individual patients. Conventional sunscreens are formulated to protect against ultraviolet B and A light (particularly UVB) and may therefore not be effective in those with solar urticaria being triggered by visible light. Reflectant sunscreens that are based on titanium dioxide or zinc oxide will be more effective as they cover UVA, UVB, and visible light. In the UK, the SPF (sun protection factor) number tells you how effective the sunscreen is for UVB, and the star rating (usually found on the back of the bottle, with a maximum 4 stars) gives a measure of the UVA protection. Your doctor will advise on which sunscreens you should use.
- A tinted reflectant sunscreen 'Dundee Reflectant Sunscreen', which is available in 3 colours, is available on prescription from Tayside Pharmaceuticals (see below for details) and is effective at blocking visible light. These can be mixed to obtain a good colour match with your skin.
- **Using photoprotective window films.** Some people may need to apply special photoprotective window films to the windows of their car and home in order to block out UVA and UVB light. These protective films may stop working and need replacing after about five years. Some car manufacturers offer UV protective glass as standard or as an optional extra, however most car windows do not block UV light. Your dermatologist may be able to advise you about suppliers of UV protective film. The British Photodermatology Group has released a consensus statement on [UV protective films](#).
- **Antihistamines.** Once solar urticaria develops it can be treated with antihistamine tablets which block the effects of histamine release. Antihistamines can reduce the symptoms and appearance of the weals of urticaria and can be an extremely effective treatment for some patients.

- **Montelukast.** If antihistamines are ineffective then montelukast, usually used to treat asthma, can be added.
- **Steroids.** Steroid tablets may occasionally be used to relieve severe flares.
- **Phototherapy.** If you are still having problems, then [phototherapy](#) (where carefully measured artificial doses of UVA/UVB are delivered to your skin in a special cabin by specially trained nurses) may be an additional treatment option.
- **Other treatments.** These are tried if other treatments do not work and include [cyclosporin](#), anti-IgE antibody (omalizumab), plasma exchange, photophoresis and intra-venous immunoglobulin.

#### **Vitamin D advice**

The evidence relating to the health effects of serum Vitamin D levels, sunlight exposure and Vitamin D intake remains inconclusive. Avoiding all sunlight exposure if you suffer from light sensitivity, or to reduce the risk of melanoma and other skin cancers, may be associated with Vitamin D deficiency.

Individuals avoiding all sun exposure should consider having their serum Vitamin D measured. If levels are deficient (less than 50 nmol/L) or reduced (52.5-72.5 nmol/L) they may wish to consider taking supplementary vitamin D3, 10-25 micrograms per day, and increasing their intake of foods high in Vitamin D such as oily fish, eggs, meat, fortified margarines and cereals. Vitamin D3 supplements are widely available from health food shops.

#### **Where can I get more information about solar urticaria?**

*Web links to other detailed information:*

<http://www.dermnetnz.org/reactions/solar-urticaria.html>

<http://emedicine.medscape.com/article/1050485-overview>

*Other useful information:*

*Tayside Pharmaceuticals*

Ninewells Hospital

Dundee, DD1 9SY

Tel: 01382 632052

For details of source materials used please contact the Clinical Standards Unit ([clinicalstandards@bad.org.uk](mailto:clinicalstandards@bad.org.uk)).

**This leaflet aims to provide accurate information about the subject and is a consensus of the views held by representatives of the British Association of Dermatologists: individual patient circumstances may differ, which might alter both the advice and course of therapy given to you by your doctor.**

*This leaflet has been assessed for readability by the British Association of Dermatologists' Patient Information Lay Review Panel*

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